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Supplemental response to the Office Action dated March 28, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1. (Currently Amended) An absorbent resin particle comprising:

a crosslinked polymer (A) including, ~~as essential constituent units,~~ a water-soluble vinyl monomer (a1), and/or a vinyl monomer (a2) that is formed into the water-soluble vinyl monomer (a1) by hydrolysis, and an internal crosslinking agent (b); and

a hydrophobic substance (C),

wherein

the absorbent resin particle has a structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle; and

the hydrophobic substance (C) is at least one hydrophobic substance selected from the group consisting of a hydrophobic substance (C1) containing a hydrocarbon group, a hydrophobic substance (C2) containing a hydrocarbon group having a fluorine atom, and a hydrophobic substance (C3) having a polysiloxane structure and has a viscosity at 25°C at a range of 10 mPa·s to 2000 mPa·s.

2. (Original) The absorbent resin particle according to claim 1, wherein

the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle is a structure such that each particle of the absorbent resin particle contains a connection (RC) formed with the hydrophobic substance (C).

3. (Previously Presented) The absorbent resin particle according to claim 1, wherein

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the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle is a structure such that a material (D) obtained by coating or impregnating a part or an entirety of a surface of either a hydrophilic material (d1) or a hydrophobic material (d2) with the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle.

4. (Original)   The absorbent resin particle according to claim 1, wherein
the hydrophobic substance (C) has a HLB value in a range of 1 to 10.

5. (Original)   The absorbent resin particle according to claim 1, wherein
the hydrophobic substance (C) is a silicone or a modified silicone.

6. (Original)   The absorbent resin particle according to claim 1, further comprising a diffusing-penetrating agent (E) as a constituent component.

7. (Original)   The absorbent resin particle according to claim 1, wherein
the absorbent resin particle exhibits a diffusion absorption amount in a range of 40 ml to 70 ml.

8. (Original)   The absorbent resin particle according to claim 1, wherein
the absorbent resin particle exhibits an absorption time (Z) in a range of 0.5 minute to 3.5 minutes, the absorption time being a time necessary for the absorbent resin particle to swell to 70 percent by volume with respect to a saturated swelling degree by absorbing physiological saline.

9. (Previously Presented)   The absorbent resin particle according to claim 1, wherein
the absorbent resin particle satisfies formulae (2) and (3):

$$30 \le (X) \le 70 \qquad (2)$$
$$(Z) \le -0.0071(Y) + 2.7 \qquad (3)$$

where

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(X) represents a water-retention amount (g/g) of the absorbent resin particle that had been immersed in physiological saline for one hour,

(Y) represents a liquid permeation rate (ml/min) under loading of 2.14k Pa at which physiological saline permeates the absorbent resin particle that has been immersed in physiological saline for one hour, and

(Z) represents an absorption time (min) necessary for a sample to swell to 70 percent by volume with respect to a saturated swelling degree by absorbing physiological saline.

10. (Original) The absorbent resin particle according to claim 9, wherein
the absorbent resin particle further satisfies formula (4):
$$10 \leq (Y) \leq 100 \quad (4)$$

11. (Original) An absorber comprising:
the absorbent resin particle according to claim 1; and
a fibrous material.

12. (Original) An absorbent article comprising an absorber according to claim 11.

13. (Previously Presented)   An absorbent resin particle having a diffusion absorption amount in a range of 40 ml to 70 ml.

14. (Previously Presented)   The absorbent resin particle according to claim 1, wherein a weight average particle diameter of the absorbent resin particle is 100 μm to 800 μm.

15. (Previously Presented)   The absorbent resin particle according to claim 1, wherein a content of the hydrophobic substance (C) is 0.001 wt% to 3 wt% based on a weight of the crosslinked polymer (A).

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16. (Currently Amended)   An absorbent resin particle comprising:

a crosslinked polymer (A) including, as essential constituent units, a water-soluble vinyl monomer (a1), and/or a vinyl monomer (a2) that is formed into the water-soluble vinyl monomer (a1) by hydrolysis, and an internal crosslinking agent (b); and

a hydrophobic substance (C),

wherein

the absorbent resin particle has a structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle,

the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle being a structure such that each particle of the absorbent resin particle contains a connection (RC) formed with the hydrophobic substance (C);

the hydrophobic substance (C) is at least one hydrophobic substance selected from the group consisting of a hydrophobic substance (C1) containing a hydrocarbon group, a hydrophobic substance (C2) containing a hydrocarbon group having a fluorine atom, and a hydrophobic substance (C3) having a polysiloxane structure, and is a pulverized film or beads; and

a content of the hydrophobic substance (C) is 0.001 wt% to 3 wt% based on a weight of the crosslinked polymer (A).

17. (Previously Presented)   The absorbent resin particle according to claim 16, wherein the hydrophobic substance (C) has a HLB value in a range of 1 to 10.

18. (Previously Presented)   The absorbent resin particle according to claim 16, wherein the hydrophobic substance (C) is a silicone or a modified silicone.

19. (Previously Presented)   The absorbent resin particle according to claim 16, further comprising a diffusing-penetrating agent (E) as a constituent component.

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20. (Previously Presented)   The absorbent resin particle according to claim 16, wherein
the absorbent resin particle exhibits a diffusion absorption amount in a range of
40 ml to 70 ml.

21. (Previously Presented)   The absorbent resin particle according to claim 16, wherein
the absorbent resin particle exhibits an absorption time (Z) in a range of 0.5
minute to 3.5 minutes, the absorption time being a time necessary for the absorbent resin
particle to swell to 70 percent by volume with respect to a saturated swelling degree by
absorbing physiological saline.

22. (Previously Presented)   The absorbent resin particle according to claim 16, wherein
the absorbent resin particle satisfies formulae (2) and (3):

$$30 \leq (X) \leq 70 \qquad (2)$$
$$(Z) \leq -0.0071(Y) + 2.7 \qquad (3)$$

where

(X) represents a water-retention amount (g/g) of the absorbent resin particle that
had been immersed in physiological saline for one hour,

(Y) represents a liquid permeation rate (ml/min) under loading of 2.14k Pa at
which physiological saline permeates the absorbent resin particle that has been immersed
in physiological saline for one hour, and

(Z) represents an absorption time (min) necessary for a sample to swell to 70
percent by volume with respect to a saturated swelling degree by absorbing physiological
saline.

23. (Previously Presented)   The absorbent resin particle according to claim 22, wherein
the absorbent resin particle further satisfies formula (4):
$$10 \leq (Y) \leq 100 \qquad (4)$$

24. (Previously Presented)   An absorber comprising:

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the absorbent resin particle according to claim 16; and

a fibrous material.

25. (Previously Presented)   An absorbent article comprising an absorber according to claim 24.

26. (Previously Presented)   The absorbent resin particle according to claim 16, wherein a weight average particle diameter of the absorbent resin particle is 100 μm to 800 μm.

27. (Currently Amended)   An absorbent resin particle comprising:

a crosslinked polymer (A) including, as essential constituent units, a water-soluble vinyl monomer (a1), and/or a vinyl monomer (a2) that is formed into the water-soluble vinyl monomer (a1) by hydrolysis, and an internal crosslinking agent (b); and

a hydrophobic substance (C),

wherein

the absorbent resin particle has a structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle,

the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle being a structure such that a material (D) obtained by coating or impregnating a part or an entirety of a surface of either a hydrophilic material (d1) or a hydrophobic material (d2) with the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle, the hydrophilic material (d1) and the hydrophobic material (d2) having a volume-average particle diameter of 1 μm to 150 μm;

the hydrophobic substance (C) is at least one hydrophobic substance selected from the group consisting of a hydrophobic substance (C1) containing a hydrocarbon group, a hydrophobic substance (C2) containing a hydrocarbon group having a fluorine atom, and a hydrophobic substance (C3) having a polysiloxane structure; and

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a content of the hydrophobic substance (C) is 0.001 wt% to 3 wt% based on a weight of the crosslinked polymer (A).

28. (Previously Presented)   The absorbent resin particle according to claim 27, wherein the hydrophobic substance (C) has a HLB value in a range of 1 to 10.

29. (Previously Presented)   The absorbent resin particle according to claim 27, wherein the hydrophobic substance (C) is a silicone or a modified silicone.

30. (Previously Presented)   The absorbent resin particle according to claim 27, further comprising a diffusing-penetrating agent (E) as a constituent component.

31. (Previously Presented)   The absorbent resin particle according to claim 27, wherein the absorbent resin particle exhibits a diffusion absorption amount in a range of 40 ml to 70 ml.

32. (Previously Presented)   The absorbent resin particle according to claim 27, wherein the absorbent resin particle exhibits an absorption time (Z) in a range of 0.5 minute to 3.5 minutes, the absorption time being a time necessary for the absorbent resin particle to swell to 70 percent by volume with respect to a saturated swelling degree by absorbing physiological saline.

33. (Previously Presented)   The absorbent resin particle according to claim 27, wherein the absorbent resin particle satisfies formulae (2) and (3):

$$30 \leq (X) \leq 70 \qquad (2)$$
$$(Z) \leq -0.0071(Y) + 2.7 \qquad (3)$$

where

(X) represents a water-retention amount (g/g) of the absorbent resin particle that had been immersed in physiological saline for one hour,

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(Y) represents a liquid permeation rate (ml/min) under loading of 2.14k Pa at which physiological saline permeates the absorbent resin particle that has been immersed in physiological saline for one hour, and

(Z) represents an absorption time (min) necessary for a sample to swell to 70 percent by volume with respect to a saturated swelling degree by absorbing physiological saline.

34. (Previously Presented) The absorbent resin particle according to claim 33, wherein the absorbent resin particle further satisfies formula (4):

$$10 \leq (Y) \leq 100 \quad (4)$$

35. (Previously Presented) An absorber comprising:
the absorbent resin particle according to claim 27; and
a fibrous material.

36. (Previously Presented) An absorbent article comprising an absorber according to claim 35.

37. (Previously Presented) The absorbent resin particle according to claim 27, wherein a weight average particle diameter of the absorbent resin particle is 100 μm to 800 μm.

38. (Currently Amended) An absorbent resin particle comprising:
a crosslinked polymer (A) including, as essential constituent units, a water-soluble vinyl monomer (a1), and/or a vinyl monomer (a2) that is formed into the water-soluble vinyl monomer (a1) by hydrolysis, and an internal crosslinking agent (b); and
a hydrophobic substance (C),
wherein
the absorbent resin particle has a structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle,

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the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle being a structure such that each particle of the absorbent resin particle contains a connection (RC) formed with the hydrophobic substance (C), the absorbent resin particle been obtained by mixing with a hydrogel of the crosslinked polymer (A) and the connection (RC); and

the hydrophobic substance (C) is at least one hydrophobic substance selected from the group consisting of a hydrophobic substance (C1) containing a hydrocarbon group, a hydrophobic substance (C2) containing a hydrocarbon group having a fluorine atom, and a hydrophobic substance (C3) having a polysiloxane structure.

39. (Previously Presented)   The absorbent resin particle according to claim 38, wherein the structure such that a part or an entirety of the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle is a structure such that a material (D) obtained by coating or impregnating a part or an entirety of a surface of either a hydrophilic material (d1) or a hydrophobic material (d2) with the hydrophobic substance (C) is contained in the inside of each particle of the absorbent resin particle.

40. (Previously Presented)   The absorbent resin particle according to claim 38, wherein the hydrophobic substance (C) has a HLB value in a range of 1 to 10.

41. (Previously Presented)   The absorbent resin particle according to claim 38, wherein the hydrophobic substance (C) is a silicone or a modified silicone.

42. (Previously Presented)   The absorbent resin particle according to claim 38, further comprising a diffusing-penetrating agent (E) as a constituent component.

43. (Previously Presented)   The absorbent resin particle according to claim 38, wherein the absorbent resin particle exhibits a diffusion absorption amount in a range of 40 ml to 70 ml.

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44. (Previously Presented)   The absorbent resin particle according to claim 38, wherein
    the absorbent resin particle exhibits an absorption time (Z) in a range of 0.5
minute to 3.5 minutes, the absorption time being a time necessary for the absorbent resin
particle to swell to 70 percent by volume with respect to a saturated swelling degree by
absorbing physiological saline.

45. (Previously Presented)   The absorbent resin particle according to claim 38, wherein
    the absorbent resin particle satisfies formulae (2) and (3):

$$30 \leq (X) \leq 70 \qquad (2)$$
$$(Z) \leq -0.0071(Y) + 2.7 \quad (3)$$

where

    (X) represents a water-retention amount (g/g) of the absorbent resin particle that
had been immersed in physiological saline for one hour,

    (Y) represents a liquid permeation rate (ml/min) under loading of 2.14k Pa at
which physiological saline permeates the absorbent resin particle that has been immersed
in physiological saline for one hour, and

    (Z) represents an absorption time (min) necessary for a sample to swell to 70
percent by volume with respect to a saturated swelling degree by absorbing physiological
saline.

46. (Previously Presented)   The absorbent resin particle according to claim 45, wherein
    the absorbent resin particle further satisfies formula (4):
    $$10 \leq (Y) \leq 100 \quad (4)$$

47. (Previously Presented)   An absorber comprising:
    the absorbent resin particle according to claim 38; and
    a fibrous material.

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48. (Previously Presented) An absorbent article comprising an absorber according to claim 47.

49. (Previously Presented) The absorbent resin particle according to claim 38, wherein a weight average particle diameter of the absorbent resin particle is 100 μm to 800 μm.

50. (Previously Presented) The absorbent resin particle according to claim 38, wherein a content of the hydrophobic substance (C) is 0.001 wt% to 3 wt% based on a weight of the crosslinked polymer (A).

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